

Francesca Forzani

Testimony to the Texas Senate Committee on Education
July 20, 2010

My name is Francesca Forzani. I am the associate director of the Teacher Education Initiative at the University of Michigan-Ann Arbor. In this role, I work with School of Education dean Deborah Loewenberg Ball and other colleagues to design and study practice-focused approaches to teacher education, and to develop training opportunities for teachers around the country. I am also a former public school teacher and Teach for America corps member. I taught high school English for four years in the rural Mississippi Delta and spent several years on the staff of Teach for America's summer training institute.

My goal today is to provide you with an overview of the problem that is often called "teacher quality" and to explain what it would take to get high quality teaching at scale in our nation's classrooms.

I hope you will remember two things from my testimony:

First, teacher quality is a problem primarily of training, not primarily of recruitment, incentives, or other strategies. We need to ensure that more than four million teachers can teach effectively in this country every year, and we cannot do that simply by improving our recruitment strategies—even if elite college graduates or accomplished mid-career professionals could automatically teach well, there are not enough of them out there to meet our demand.

Second, the teacher training curriculum is under-developed in this country, and this is the heart of the problem. It is a problem that cuts across all programs and pathways to teaching, and we know how to solve it.

Let me begin by explaining the broader problem that we must urgently try to remedy. Young people in the United States are not consistently performing at high academic levels, and many of our schools lack the resources and expertise to prepare our youth to participate in a rapidly changing global economy. International comparisons show that American children lag significantly behind their counterparts in other countries. For example, on a recent assessment, U.S. 15-year-olds were outperformed in math by students in 23 of 38 countries. They were outperformed in science by students in 18 of 38 countries. Within the United States, there are significant disparities in achievement between students from different racial and socioeconomic backgrounds, with children of color and those living in poverty performing significantly less well than their affluent and non-minority counterparts. And every day in this country, 1.2 million students drop out of school—that's more than 6,000 students every school day and one every 26 seconds. Graduation rates are also much lower for minority students.

Many people have ideas about how to remedy this problem by improving "teacher quality." Some proposals focus on how to identify and fire incompetent teachers. Other seek to increase the pay of teachers who are effective in producing student learning. Still others create incentives to attract more bright people to the teaching profession. And some focus on restricting the programs through which teachers are prepared for practice. Not one of these is sufficient to solve the core problem: that of ensuring that every teacher, in every classroom, can do the work we are asking of them. What we need is quality teaching. The first point I want to make is that this is a problem of training, both initial and continuing, and not merely one of recruitment, sanctions, rewards, or other incentives.

There are two reasons why: First, despite how commonplace it may seem, teaching is far from simple work. Doing it well requires detailed knowledge of the subject being taught and a great deal of skill in making it learnable. It also requires good judgment and a tremendous capacity to relate to a wide range of young people, understand culture, context, and community, and manage a classroom. It requires interpreting and using data to improve the effectiveness of instruction. And as we seek to increase the academic standards and demands that we want our young people to meet, the challenges of good teaching will only escalate. Teaching complex academic skills and knowledge, not to mention skills of collaboration, interaction, and resourcefulness in an increasingly networked world, is still more difficult than teaching more basic skills.

Second, building teaching quality is a problem of massive scale. The teaching force numbers almost four million—a staggering size. No other occupation even comes close. This means that it is crucial that we create high quality teacher education and professional development that will help large numbers of regular people develop the ability to teach effectively, whoever their students are. Simply recruiting bright people to the profession or providing incentives to effective teachers cannot come even close to solving the problem.

One problem is that although one needs to know the subject really well, accomplished experts and very smart people are not automatically good at making their expertise explicit to others. And they can have a really hard time figuring out how someone else is thinking.

The following simple example illustrates my point. Compute the basic multiplication problem 49 times 25. The answer? 1225.

Can you figure out why a fourth grader might think the answer was 1485? Try to figure out what steps would produce this result:

$$\begin{array}{r} 49 \\ \times 25 \\ \hline 405 \\ 108 \\ \hline 1485 \end{array}$$

(If you cannot figure it out, I provide an explanation at the end.¹)

This example helps to show the kind of insight about the subject that teachers must have in order to help others learn the subject. Teachers must go beyond knowing the right answer to understanding the common errors students make. And they must know how to help students move beyond them. Even if very smart and highly educated people could teach effectively without training, there are just not enough such people to fill every classroom in this country. And skilled teaching requires much more than being “good at math” or being a good writer. To achieve high levels of learning for all our nation’s students, good professional training and assessment of teaching are essential.

The second point I want to make is that we lack an effective system for preparing teachers in this country. We need to build a system that guarantees that *all* beginning teachers can perform competently from their first day in the classroom, no matter how they enter teaching. Right now, teachers are considered “qualified” simply by virtue of graduating from an accredited program or completing a major in the subject that they teach. This sidesteps the real issue, for it relies on poor proxies for teaching effectiveness instead of demonstrated capacity to do the work that will help students learn. This is perilous for our students.

The curriculum for learning to teach is a central part of the problem. In other professions, from aviation to medicine to the clergy, novices learn to carry out specific elements of their work and must demonstrate their ability to perform key tasks before they are permitted to practice independently. Prospective pilots learn to execute takeoffs, landings, and turns, for example; medical students to conduct a physical examination and dress a wound. In contrast, the field of teaching has never identified and developed consensus around the core tasks of the work and designed professional education that deliberately prepares novices to do those tasks. Across all pathways, from programs that we think of as more traditional to those referred to as “alternate route”, much teacher education remains a collection of uncoordinated knowledge-centered courses and “field experiences.” Specific elements of practice—such as the ability to conduct an effective class discussion, to accurately diagnose a child’s reading difficulty, or to have a phone conversation with a parent, for example—are rarely taught deliberately or assessed.

To improve teaching effectiveness, we must refocus professional education on the actual work of teaching. Three key elements must comprise this redesign of teacher training:

1. Focus teachers’ preparation on the work of teaching to high levels of skill and provide detailed and specialized knowledge of the academic content they teach;
2. Provide a range of settings for close practice and feedback so that teachers can be deliberately taught and explicitly coached with the skills to reach a wide range of learners; and
3. Develop highly credible and predictive assessments of professional knowledge and skill so that no one enters a classroom without fundamental capacity for effective performance as a beginning teacher.

At the heart of this system must be a set of core skills of teaching that are crucial to student learning. No beginning teacher should be allowed to teach young people if he or she cannot perform these flexibly and skillfully. They include skills of communicating content clearly to students, holding students to high standards while explicitly enabling them to do complex work, establishing and maintaining a productive classroom climate, interpreting and using evidence of student performance, and connecting effectively with students’ families. To do these things, teachers must develop not only instructional skill, but the detailed knowledge of subject matter that they need in order to help others learn. The core mission of teacher education should be to develop teachers’ skills with core instructional tasks and their facility with the special kinds of content knowledge needed to carry those tasks out competently. The curriculum should also include carefully designed and sequenced opportunities to practice the work in a variety of settings.

We must also build a professionally valid licensure system that requires all teacher candidates to demonstrate the required level of capacity to teach young children responsibly. Teacher candidates should demonstrate proficient performance with each core skill through a system of performance assessments before they are granted an initial teaching license. These assessments would focus on measuring teachers’ content knowledge used for teaching, their actual skill with the instructional practices most important for student learning; and their persistence in working to make sure that every one of their students learns. These assessments would be different from the ones we currently have in this country which do not, for the most part, focus on the ability to teach. They would rigorously measure teachers’ ability to mobilize knowledge in teaching and to do actual tasks of teaching. Examples include diagnosing students’ learning difficulties, designing a test, conducting a discussion, giving pupils feedback on their work, choosing and using strategic instructional examples, interpreting data on student progress and using it to calibrate instruction.

At the University of Michigan, we are designing a new model of teacher education and performance assessment that will train anyone from the most brilliant to the most average individual in essential instructional knowledge and skill. Our goal is to develop a comprehensive professional training curriculum that will span pre-service education through at least the first five years of teaching practice, with corresponding assessments that will provide information about teachers' increasing competence as they become more experienced. Though the focus of our work has heretofore been our own teacher education program, we are partnering with other stakeholders in the creation of a new, multi-tiered licensure system for teachers. Our approach departs significantly from current practice in which teachers start teaching with little training in the complexities of the work and are expected to learn primarily from experience. Experience is an unreliable method of learning in any domain, from athletics to skilled trades to teaching. Although knowledge and skill can improve with experience, mis-learning often develops and is reinforced through repetition. Many important skills cannot be developed without direct training, supervised practice, and rigorous feedback.

Our argument is not an argument for or against either "traditional" or "alternative" pathways into teaching, and our work is aimed at all kinds of teacher education programs. We should encourage multiple pathways into teaching and multiple providers of training in order to recruit the diverse teaching force that our country needs. What is most important is that graduates of any pathway be capable of effective practice.

Students must have teachers who are prepared to help them learn, not beginners who are struggling with or naïve about their responsibilities. Allowing teachers to learn on our young people is unethical. Teaching is intricate work that can be learned to high levels of skill with appropriate training. What we need in this country is a professional continuum that would provide teachers with high-quality training in more and more advanced practice, and that would tie their continued advancement in the profession to their ability to demonstrate higher levels of professional skill.

We need to consider along with what I have described here significant changes in the educational infrastructure in this country— in the organization of schools, teachers' work, and their compensation. For example, schools should be set up to provide integral support for early career teachers so that they can more effectively and rapidly increase their professional skill, just as hospitals support beginning nurses. Teachers with different levels of license should have different assignments in schools and should be compensated differentially. Schools would need to be staffed to include teachers of all levels of licensure to ensure that all schools have the full complement of professional expertise. To make use of that expertise in improving students' learning, teachers' professional work days would have to include— as they do in other countries— time and space for interaction with other teachers of these different levels of expertise, with a focus on examining student performance, student difficulties, curriculum issues, and on developing focused instructional strategies. All of this, too, is what we see in other professions. Finally, we need in this country an appropriately-resourced and expertly directed system of design, development, and research that will produce the evidence base and resources to make it possible to accomplish high levels of success in K-12 education. Doing this would require a coordinated plan to build the knowledge and tools to achieve these specific goals. To be effective, this comprehensive system of design, development, and research must be oriented toward understanding and solving our core problems of education and must be fundamentally rooted in and connected to practice and policy.

One important footnote to all of this is that this work I am describing would be helped immeasurably if we had a common ambitious curriculum for K-12 schools, consisting of goals,

standards, and metrics for their attainment, that would provide a consistent and coherent infrastructure for teaching and learning. This curriculum would need to be accompanied by assessments that were well coordinated with this common curriculum and that could be used at scale with high degrees of reliability and validity. These assessments would use new technologies and the best expertise drawn from across disciplines to build a new suite of assessments to track the kinds of outcomes we must be seeking to achieve with all of our students.

The most important point overall is that we must stop debating whether teachers recruited one way or another are more effective. Instead, we must turn now to training people to do the real work of teaching and to building a system that can reliably supply good teaching to every pupil in our nation's classrooms, every year.

¹ $9 \times 5 = 45$. If someone "carries" the 4 and places it above the 4 in 49, and *adds* the 4's together ($4 + 4 = 8$) and then multiplies 8×5 , the result is 40; hence, 405 on the first row. Similarly, if someone multiplies $5 \times 2 = 10$, writes the 1 above the 4 in 49, and then adds $1 + 4 = 5$, and multiplies $5 \times 2 = 10$, the result is 108. In this multiplication, the "carried numbers" must be added *after* multiplying, not before. Can you explain why, except that you were taught to do it that way? Teachers not only need to be able to figure out, swiftly, what processes might lead to difficulties, but they must also be able to explain or remedy in ways that students can understand. Being able to do this is more than simply knowing how to multiply.